

Bi-Weekly Summary Report
Temporary Discharge of Water to the Underground Mine and Discharge of Sludge and Off-Spec Water
Chevron Mining Inc., Questa Mine, Questa, New Mexico
Report Period: December 7, 2016 through December 20, 2016
Report Date: December 23, 2016

Water Collection System

Volume Discharged to the Underground Mine (gallons):

Spring 13, Spring 39, GWW-1, GWW-2, and GWW-3 combined flows: 8,029,000
(Includes water used for the commissioning of the temporary water treatment facility)

Water Quality Sample Results:

Quarterly samples were not collected during the referenced period

Pilot Surface-Based Mine Dewatering System:

A sample was collected from DWW-2 on 12/01, the results of this sample are pending

Mine Water Levels and Water Quality from Shaft #1 Monitoring Well:

Water elevation = 7,205.3 feet on 12/14

A sample was collected on 12/07, November sample results for Shaft #1 MMW are attached.

Mine Water Elevation-Capacity:

See attached elevation-capacity graph

Moly Adit Water Quality and Flow:

A quarterly sample was collected on 12/07

A quarterly flow measurement was not collected during the referenced period

Bedrock Monitoring Wells Water Quality and Water Levels:

Quarterly sample and water level from MMW-8A was collected on 12/02

Quarterly sample and water level from MMW-19B was collected on 12/03

Quarterly samples and water levels from MMW-36C and MMW-44B were collected on 12/05

November analytical results for MMW-19B and MMW-44B are attached,

All other analytical results are pending.

Alluvial Seeps/Springs Water Quality and Flow:

Quarterly samples and flow from Portal Spring, Cabin Spring, Spring 39, and Goathill Seep were not collected during the referenced period

Temporary WTP:

Volume of treated water discharged to Outfall 001 (gallons):

No treated water discharged

Volume of off-spec water routed to upset cell (gallons):

No water routed to upset cell

Daily pH at designated 001 Outfall:

No daily pH recorded at Outfall 001

Monthly water quality sample results (designated 001 Outfall):

No sample collected at Outfall 001

Volume of sludge disposed in Interim Repository (cubic yards):

No sludge disposed during the reporting period.

Permanent WTP:

This system is currently under construction. No measurements or samples collected from this location.

Volume of shake down water discharged to the underground mine (gallons):

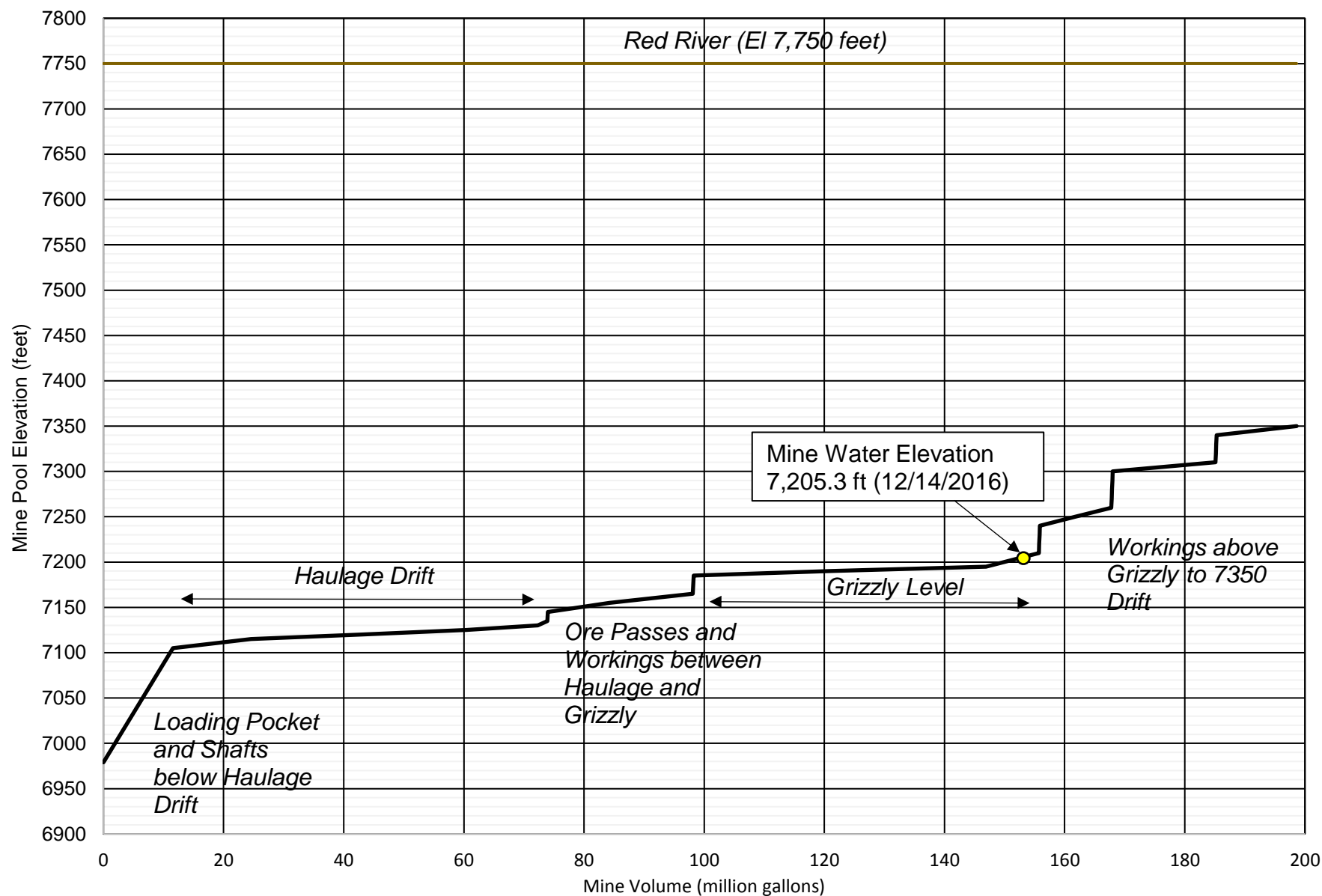
Volume of treated water discharged to Outfall 001 (gallons):

Water treatment quality parameters (pH, temp., spec. cond.):

Notes:

Reporting requirements based on NMED September 12, 2016 approval for temporary discharge of impacted water to the underground mine and NMED September 26, 2016 approval for temporary discharge of sludge and off-spec water

Underground Mine Workings - Cumulative Volume by Elevation



Hall Environmental Analysis Laboratory, Inc.

CLIENT: Chevron EMC Mining Inc- Questa Mine

Client Sample ID: Shaft 1-MMW-T01N-101216

Project: DP-1055

Collection Date: 10/12/2016 9:23:00 AM

Lab ID: 1610694-001

Matrix: GROUNDWA

Received Date: 10/14/2016 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	3.8	1.0	2.0		mg/L	20	10/17/2016 12:07:04 PM
Chloride	54	1.0	10		mg/L	20	10/17/2016 12:07:04 PM
Sulfate	1300	7.1	25		mg/L	50	10/25/2016 9:26:29 PM
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	10/17/2016 1:09:06 PM
EPA METHOD 245.1: MERCURY							Analyst: DBD
Mercury	0.00011	0.000053	0.00020	J	mg/L	1	10/28/2016 11:01:02 AM
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	12.80	1.485	20.00	J	mg/L CaC	1	10/18/2016 12:10:24 PM
Carbonate (As CaCO ₃)	2.400	2.000	2.000		mg/L CaC	1	10/18/2016 12:10:24 PM
Total Alkalinity (as CaCO ₃)	15.20	1.485	20.00	J	mg/L CaC	1	10/18/2016 12:10:24 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2100	21.0	40.0	*D	mg/L	1	10/20/2016 6:52:00 PM
EPA METHOD 180.1: TURBIDITY							Analyst: KS
Turbidity	11	0.50	0.50	*H	NTU	1	10/14/2016 5:43:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Chevron EMC Mining Inc- Questa Mine

Client Sample ID: Shaft 1-MMW-D01N-101216

Project: DP-1055

Collection Date: 10/12/2016 9:23:00 AM

Lab ID: 1610694-002

Matrix: GROUNDWA

Received Date: 10/14/2016 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED
Aluminum	ND	0.0038	0.020		mg/L	1	10/24/2016 3:19:39 PM
Barium	0.041	0.0013	0.0020		mg/L	1	10/21/2016 6:49:01 PM
Beryllium	0.00041	0.00031	0.0020	J	mg/L	1	10/21/2016 6:49:01 PM
Cadmium	ND	0.00075	0.0020		mg/L	1	10/21/2016 6:49:01 PM
Calcium	280	2.5	5.0		mg/L	5	10/24/2016 3:27:29 PM
Chromium	ND	0.0018	0.0060		mg/L	1	10/21/2016 6:49:01 PM
Cobalt	0.0016	0.00074	0.0060	J	mg/L	1	10/21/2016 6:49:01 PM
Copper	ND	0.0040	0.0060		mg/L	1	10/24/2016 3:19:39 PM
Iron	0.021	0.020	0.020		mg/L	1	10/24/2016 3:19:39 PM
Magnesium	54	0.50	1.0		mg/L	1	11/6/2016 1:43:33 PM
Manganese	0.69	0.00032	0.0020	*	mg/L	1	10/21/2016 6:49:01 PM
Molybdenum	0.14	0.0019	0.0080		mg/L	1	10/21/2016 6:49:01 PM
Nickel	ND	0.0024	0.010		mg/L	1	10/21/2016 6:49:01 PM
Potassium	71	0.50	1.0		mg/L	1	10/24/2016 3:19:39 PM
Silicon	0.69	0.019	0.080		mg/L	1	10/21/2016 6:49:01 PM
Silver	ND	0.0028	0.0050		mg/L	1	10/21/2016 6:49:01 PM
Sodium	230	2.5	5.0		mg/L	5	10/24/2016 3:27:29 PM
Vanadium	ND	0.0013	0.050		mg/L	1	10/21/2016 6:49:01 PM
Zinc	ND	0.0028	0.010		mg/L	1	10/21/2016 6:49:01 PM

EPA 200.8: DISSOLVED METALSAnalyst: **JLF**

Arsenic	0.0011	0.00014	0.0010		mg/L	1	10/25/2016 7:56:31 PM
Lead	ND	0.00017	0.00050		mg/L	1	10/25/2016 7:56:31 PM
Selenium	0.0016	0.00021	0.0010		mg/L	1	10/25/2016 7:56:31 PM
Uranium	ND	0.000051	0.00050		mg/L	1	10/25/2016 7:56:31 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Chevron EMC Mining Inc- Questa Mine

Client Sample ID: MMW-44B-T01N-11042016

Project: DP 1055

Collection Date: 11/4/2016 10:05:00 AM

Lab ID: 1611369-003

Matrix: GROUNDWA

Received Date: 11/8/2016 9:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	1.4	0.050	0.10		mg/L	1	11/16/2016 2:53:21 AM
Chloride	28	1.0	10		mg/L	20	11/9/2016 4:53:11 PM
Sulfate	1500	7.1	25		mg/L	50	11/16/2016 3:05:46 AM
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/9/2016 8:48:58 PM
EPA METHOD 245.1: MERCURY							Analyst: DBD
Mercury	0.000071	0.000054	0.00020	J	mg/L	1	11/23/2016 9:34:32 AM
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	225.5	1.485	20.00		mg/L CaC	1	11/9/2016 2:52:54 PM
Carbonate (As CaCO ₃)	ND	2.000	2.000		mg/L CaC	1	11/9/2016 2:52:54 PM
Total Alkalinity (as CaCO ₃)	225.5	1.485	20.00		mg/L CaC	1	11/9/2016 2:52:54 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2570	21.0	40.0	*D	mg/L	1	11/13/2016 9:33:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Chevron EMC Mining Inc- Questa Mine

Client Sample ID: MMW-44B-D01N-11042016

Project: DP 1055

Collection Date: 11/4/2016 10:05:00 AM

Lab ID: 1611369-004

Matrix: GROUNDWA

Received Date: 11/8/2016 9:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED
Aluminum	ND	0.0038	0.020		mg/L	1	11/29/2016 12:57:15 PM
Barium	0.012	0.0013	0.0020		mg/L	1	11/29/2016 12:57:15 PM
Beryllium	0.0018	0.00031	0.0020	J	mg/L	1	11/29/2016 12:57:15 PM
Cadmium	ND	0.00075	0.0020		mg/L	1	11/29/2016 12:57:15 PM
Calcium	590	5.0	10		mg/L	10	11/29/2016 1:28:51 PM
Chromium	ND	0.0018	0.0060		mg/L	1	11/29/2016 12:57:15 PM
Cobalt	0.0067	0.00074	0.0060		mg/L	1	11/29/2016 12:57:15 PM
Copper	ND	0.0040	0.0060		mg/L	1	11/29/2016 12:57:15 PM
Iron	8.1	0.20	0.20	*	mg/L	10	11/29/2016 1:28:51 PM
Magnesium	45	0.50	1.0		mg/L	1	11/29/2016 12:57:15 PM
Manganese	7.2	0.0032	0.020	*	mg/L	10	11/29/2016 1:28:51 PM
Molybdenum	ND	0.0019	0.0080		mg/L	1	11/29/2016 12:57:15 PM
Nickel	ND	0.0024	0.010		mg/L	1	11/29/2016 12:57:15 PM
Potassium	3.5	0.50	1.0		mg/L	1	11/29/2016 12:57:15 PM
Silicon	9.3	0.094	0.40		mg/L	5	11/29/2016 12:59:04 PM
Silver	ND	0.0028	0.0050		mg/L	1	11/29/2016 12:57:15 PM
Sodium	120	2.5	5.0		mg/L	5	11/29/2016 12:59:04 PM
Vanadium	0.0036	0.0013	0.050	J	mg/L	1	11/29/2016 12:57:15 PM
Zinc	ND	0.0028	0.010		mg/L	1	11/29/2016 12:57:15 PM

EPA 200.8: DISSOLVED METALSAnalyst: **JLF**

Arsenic	0.00095	0.00014	0.0010	J	mg/L	1	11/22/2016 3:38:28 PM
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 8:24:54 PM
Selenium	0.0023	0.00021	0.0010		mg/L	1	11/18/2016 8:24:54 PM
Uranium	0.00055	0.000051	0.00050		mg/L	1	11/22/2016 3:38:28 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Chevron EMC Mining Inc- Questa Mine

Client Sample ID: MMW-19B-T01N-11032016

Project: DP 1055

Collection Date: 11/3/2016 12:05:00 PM

Lab ID: 1611375-001

Matrix: GROUNDWA

Received Date: 11/8/2016 9:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	1.7	0.050	0.10		mg/L	1	11/8/2016 7:14:53 PM
Chloride	5.6	0.051	0.50		mg/L	1	11/8/2016 7:14:53 PM
Sulfate	1400	7.1	25		mg/L	50	11/16/2016 12:19:12 AM
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/8/2016 8:29:22 PM
EPA METHOD 245.1: MERCURY							Analyst: DBD
Mercury	0.000072	0.000053	0.00020	J	mg/L	1	11/23/2016 9:40:31 AM
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	220.2	1.485	20.00		mg/L CaC	1	11/9/2016 3:16:24 PM
Carbonate (As CaCO ₃)	ND	2.000	2.000		mg/L CaC	1	11/9/2016 3:16:24 PM
Total Alkalinity (as CaCO ₃)	220.2	1.485	20.00		mg/L CaC	1	11/9/2016 3:16:24 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2660	21.0	40.0	*D	mg/L	1	11/13/2016 8:01:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Chevron EMC Mining Inc- Questa Mine

Client Sample ID: MMW-19B-D01N-11032016

Project: DP 1055

Collection Date: 11/3/2016 12:05:00 PM

Lab ID: 1611375-002

Matrix: GROUNDWA

Received Date: 11/8/2016 9:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED
Aluminum	ND	0.0038	0.020		mg/L	1	11/29/2016 1:15:03 PM
Barium	0.010	0.0013	0.0020		mg/L	1	11/29/2016 1:15:03 PM
Beryllium	0.0042	0.00031	0.0020	*	mg/L	1	11/29/2016 1:15:03 PM
Cadmium	ND	0.00075	0.0020		mg/L	1	11/29/2016 1:15:03 PM
Calcium	580	10	20		mg/L	20	11/29/2016 1:45:16 PM
Chromium	ND	0.0018	0.0060		mg/L	1	11/29/2016 1:15:03 PM
Cobalt	0.014	0.00074	0.0060		mg/L	1	11/29/2016 1:15:03 PM
Copper	ND	0.0040	0.0060		mg/L	1	11/29/2016 1:15:03 PM
Iron	4.1	0.10	0.10	*	mg/L	5	11/29/2016 1:16:51 PM
Magnesium	93	0.50	1.0		mg/L	1	11/29/2016 1:15:03 PM
Manganese	7.9	0.0065	0.040	*	mg/L	20	11/29/2016 1:45:16 PM
Molybdenum	0.014	0.0019	0.0080		mg/L	1	11/29/2016 1:15:03 PM
Nickel	0.033	0.0024	0.010		mg/L	1	11/29/2016 1:15:03 PM
Potassium	3.5	0.50	1.0		mg/L	1	11/29/2016 1:15:03 PM
Silicon	14	0.094	0.40		mg/L	5	11/29/2016 1:16:51 PM
Silver	ND	0.0028	0.0050		mg/L	1	11/29/2016 1:15:03 PM
Sodium	46	0.50	1.0		mg/L	1	11/29/2016 1:15:03 PM
Vanadium	0.0037	0.0013	0.050	J	mg/L	1	11/29/2016 1:15:03 PM
Zinc	0.37	0.0028	0.010		mg/L	1	11/29/2016 1:15:03 PM

EPA 200.8: DISSOLVED METALSAnalyst: **JLF**

Arsenic	0.0012	0.00014	0.0010		mg/L	1	11/18/2016 8:34:04 PM
Lead	0.0077	0.00017	0.00050		mg/L	1	11/18/2016 8:34:04 PM
Selenium	0.00095	0.00021	0.0010	J	mg/L	1	11/18/2016 8:34:04 PM
Uranium	0.044	0.00026	0.0025	*	mg/L	5	11/22/2016 4:06:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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